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ABSTRACT

This invention relates generally to a method for growing single-wall carbon nanotube (SWNT) from seed molecules. The supported or unsupported SWNT seed materials can be combined with a suitable growth catalyst by opening SWNT molecule ends and depositing a metal atom cluster. In one embodiment, a suspension of seed particles containing attached catalysts is injected into an evaporation zone to provide an entrained reactive nanoparticle. A carbonaceous feedstock gas is then introduced into the nanoparticle stream under conditions to grow single-wall carbon nanotubes. Recovery of the product produced can be done by filtration, centrifugation and the like.